Research Bulletin

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The Need for Inquiry . . .

THE NEA RESEARCH DIVISION was established in 1922. J. W. Crabtree, NEA secretary at the time, explained this action as "a response to the need for inquiry which characterizes the Association." The major publication of the Division, the *Research Bulletin*, first appeared in 1923.

Three Million and More

With the publication of the December 1957 issue, the *Research Bulletin* completed 35 volumes. During the first 20 years each volume included five reports; during the past 15 years, four issues have been published each calendar year.

The total printing of each issue has ranged from 5000 in 1923 to 80,000 in 1957. More than 3,300,000 copies have been distributed in the past three and a half decades. These detailed reports have made substantial contributions to the progress of education and to the prestige of the teaching profession.

Years of Achievement

Looking back over 35 years reveals a number of "firsts" among studies of nationwide significance. The earliest studies in the 1920's dealt with the ability of the states and the nation to pay for good schools and with the salaries paid to public-school teachers. Beginnings were made on analyses of statutes in such welfare areas as retirement and tenure. Late in the decade, reports were made on curriculum trends and on the status of the elementary-school principal.

In the 1930's studies of school finance, salaries, and teacher personnel practices were continued. New ideas also appeared: in 1931, the first nationwide estimate of teacher supply and demand; in 1934, the use of pictorial statistics in reporting census data; in 1935, a report on the economic status of teachers based upon personal budgets of many individuals; in 1938, a pioneer legal study of the statutory status of six professions; in 1939, the first nationwide study of teacher load.

In 1940 appeared a comprehensive statistical report on the status of teachers; in 1941, a detailed analysis of the budgets of state governments with respect to expenditures for highways, welfare, and education; in 1946, an unusual study of state laws affecting sectarian education and a study of school boards; in 1947, a comprehensive report on single-salary schedule practices.

In 1950 a second study was made of teacher load; in 1951, a report on the legal status of the superintendent of schools; in 1953, a unique study of the status of rural teachers initiated similar studies of the substitute teacher and the beginning teacher; in 1954, the beginning of a series of reports on personnel practices, salaries, and teacher supply-demand in higher education. The Centennial Year 1957 was celebrated by the most comprehensive study to date of the status of the American public-school teacher.

New Times, New Methods

We, in the NEA Information Services, believe that there is a large and growing audience for research findings among the members of our profession. This need calls for a broad and systematic plan of reporting.

Another need has become imperative in both education and American life—speed. The members of the profession must have ready access to the results of research. Decisions need to be made in terms of the most essential facts. Time and energy do not exist for exploration of the technical details. The call is for "the general direction NOW."

The content and format of this first number of Volume 36 are an effort to serve the maximum number of NEA members.

Details, If Needed

To provide a page of carefully summarized information for the new form of the *Research Bulletin* may require the compilation of many pages of detailed data. For 35 years these longer, more technical compilations have constituted the basis of the typical *Bulletin*. Committees, specialists in research, and administrators often need to have extensive information. Comparison of the details of these national studies with similar facts from the community provide a basis for exact and reliable plotting of status and trends.

These detailed reports will continue to be available in research monographs and other Research Division publications. Consultative services, based upon detailed surveys and studies, will be provided as in the past by letter and by personal interviews.

An Expanded Program

Each year is a time of crisis for those who teach. Not only do they have their daily duties of instruction, administration, research, and supervision, but they also have an obligation to help advance the prestige and status of the organized profession. Progress is made as we successfully meet each crisis.

In 1956, leaders of the profession recognized the need for new and improved NEA services. Their proposals were discussed in thousands of local and state groups. At the Representative Assembly in 1957 the delegates increased the annual dues and pledged themselves to an *Expanded Program*. The spirit and vision of that Centennial Convention helped to crystallize the Research Division's ideas as to the new format of the present *NEA Research Bulletin*.

The credit for this step forward belongs to all members of the NEA Research Division. They have had the enthusiastic support of the staff of the Publications Division.

FRANK W. HUBBARD
Assistant Executive Secretary
for Information Services

Salary Roundup

Instructional staff average is up $300

THIS YEAR'S estimated average salary of instructional staff members in public elementary and secondary schools is $4650; last year it was $4350. The instructional staff includes principals, supervisors, librarians, and counselors as well as classroom teachers.

Fairly accurate records of such figures are available for several decades. At the onset of World War I the average was $525. It did not break into four figures until 1920-21. Between 1930-31 and 1940-41 the average remained fairly constant, from $1440 at the beginning of the period to $1470 at the end, despite a gradual increase in teachers' qualifications. Not until 1949-50 did the average exceed $3000.

The gains, however, have been partly offset by the increase in the cost of living. In the past 10 years the average salary has risen 76 percent in current dollars but only 47 percent in purchasing power.

AVERAGES PAID TEACHERS

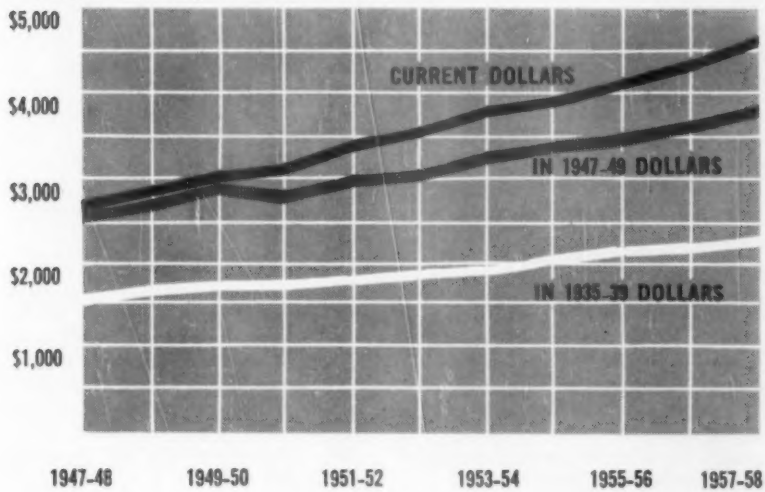
The classroom teacher's average salary rose 7.1 percent between 1956-57 and 1957-58—up from $4220 to $4520.

Five years ago 20 percent of the classroom teachers in public schools were paid less than $2500 a year; today only 3.7 percent are paid so little. In the last five years, the proportion of classroom teachers paid as much as $4500 rose from 13 to 41 percent.

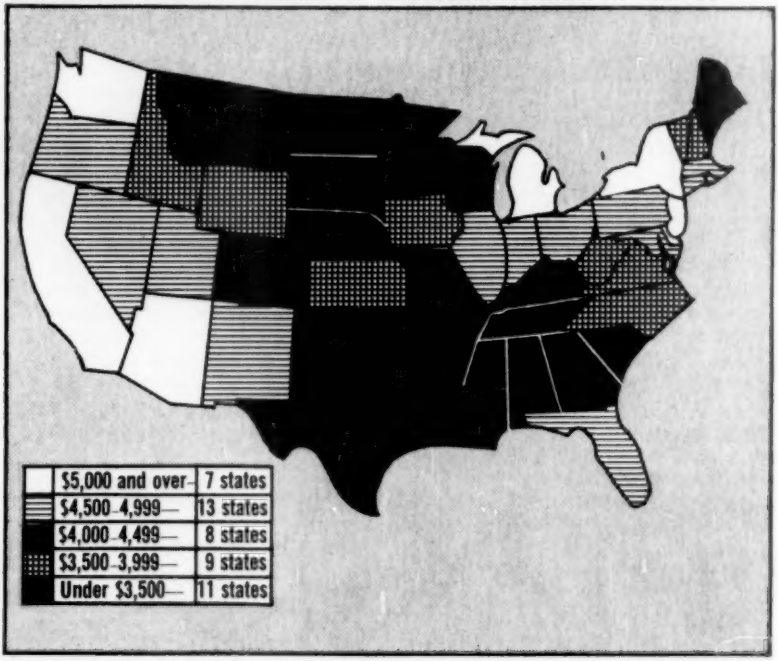
In one state approximately half the teachers are still paid less than $2500; in another, 38 percent; in another, 35 percent. On the other hand, in 27 states no teacher is paid less than $2500, and in 13 states more than half the teachers are paid $4500 or more.

States leading in average salaries of classroom teachers this year include California, $5750; New York, $5687; Delaware, $5450; New Jersey, $5210; Washington, $5175; Michigan, $5100; and Arizona, $5075. At the bottom of

1 ESTIMATED AVERAGE SALARIES OF INSTRUCTIONAL STAFF MEMBERS IN PUBLIC SCHOOLS, 1947-48 TO 1957-58



2 ESTIMATED AVERAGE SALARIES OF CLASSROOM TEACHERS IN 1957-58



the list are Mississippi, $2525; Kentucky, $3125; Arkansas, $3180; and Nebraska, North Dakota, South Carolina, and South Dakota—all at $3250.

Secondary-school teachers this year are paid an average of $4840, which is 12 percent higher than the $4325 average in elementary schools. Five years ago the difference was 18 percent. The difference is due more to higher levels of preparation of high-school teachers than to unequal schedules. Single-salary schedules are now in general use.

MINIMUMS AND MAXIMUMS

Although there are still exceptions, most local school systems pay teachers according to a definite schedule. Minimum salaries are set for beginners, annual increments are specified, and maximums are established for experienced teachers. These provisions are usually fixed for two or more levels of preparation. Salary schedules for 1957-58 from 414 urban school districts have been analyzed.

For comparison the districts are classified by size—those over 500,000 in population in Group I; between 100,000 and 500,000, Group II; and 30,000-100,000 population, Group III.

Most important in teacher recruitment is the minimum salary offered the beginning teacher who has just received the BA degree. Medians of these beginning salaries are:

Group I districts	$4000
Group II districts	3800
Group III districts	3800

Another key salary for the teaching profession is the maximum for the experienced teacher. Some cities give no incentive beyond the master's degree; others pay more to those with a sixth year or a doctorate. A small number pay top salaries on the basis of merit rating. Medians of the top maximum salaries are:

Group I districts	$6950
Group II districts	6400
Group III districts	6400

Whether the 18 great cities over a half-million in population will keep their slight edge over Groups II and III remains to be seen.

Figure 3 shows that within Group I itself there are wide differences. The minimums begin with $3340 in New Orleans and rise to $4500 in Detroit, Los Angeles, and San Francisco. At the top the range of maximums is from $5800 in Houston to $8400 in New York. In 7 of the 18 cities, higher salaries have already been approved for 1958-59.

The highest salaries reported among these three groups of cities were in the suburban communities in Group III. Examples are the maximum salaries exceeding $9000 reported by Santa Monica, Evanston (Ill.), and Great Neck. A number of smaller suburbs, below 30,000 in population, pay still higher salaries. On the whole, however, salary schedules in the smaller places are much lower than in Groups I, II, and III.

A continuing problem in salary planning is the low ceiling on teachers' salaries. Figure 4 shows the relative advances for the 93 districts in Group II. The average beginning teacher with an MA degree gets about 5 percent more than a beginner with a BA degree.

With maximum credit for education and experience, the top salary is still only 68 percent higher, on the average,

3 RANKINGS OF THE 18 LARGEST URBAN SCHOOL DISTRICTS ON SALARIES SCHEDULED FOR CLASSROOM TEACHERS, JANUARY 1, 1958

AB degree Minimum salary		AB degree Maximum salary		MA degree Maximum salary		Highest degree recognized Maximum salary	
	Los Angeles	New York	$7600	New York	$8000	New York	$8400
$4500	Detroit	Detroit	$7000	San Francisco	$7630	Los Angeles	$8250
	San Francisco	San Francisco	$6970	Detroit	$7250	San Francisco	
$4250	Chicago*	Cleveland	$6600	Cleveland	$7200	Chicago*	$8000
$4200	Cleveland	Milwaukee*		Chicago*	$7000	Detroit	$7500
	Milwaukee*	Baltimore*		Milwaukee*	$6900	Milwaukee*	
$4100	Minneapolis*	Chicago*	$6500	Minneapolis*	$6850	Cleveland	$7200
	Baltimore*	Minneapolis*		Los Angeles	$6830	Minneapolis*	
$4000	Cincinnati**	Los Angeles	$6430	Baltimore*	$6750	Baltimore	$7000
	New York	Buffalo*	$6400	Buffalo*	$6700	Boston	$6700
	Philadelphia*	Cincinnati**		Boston	$6612	Buffalo*	$6612
$3900	Pittsburgh*	Boston	$6264	Cincinnati**	$6600	Cincinnati**	$6600
	Washington	Pittsburgh*	$6200	Philadelphia*		St. Louis	
$3800	St. Louis	St. Louis		Pittsburgh*	$6400	Washington	$6500
$3768	Boston	Philadelphia*	$6000	St. Louis		Philadelphia*	$6400
$3600	Buffalo*	Washington	$5800	Washington	$6300	Pittsburgh*	
	Houston	Houston	$5600	New Orleans	$5946	New Orleans	$6246
$3340	New Orleans	New Orleans	$5264	Houston	$5800	Houston	$5800

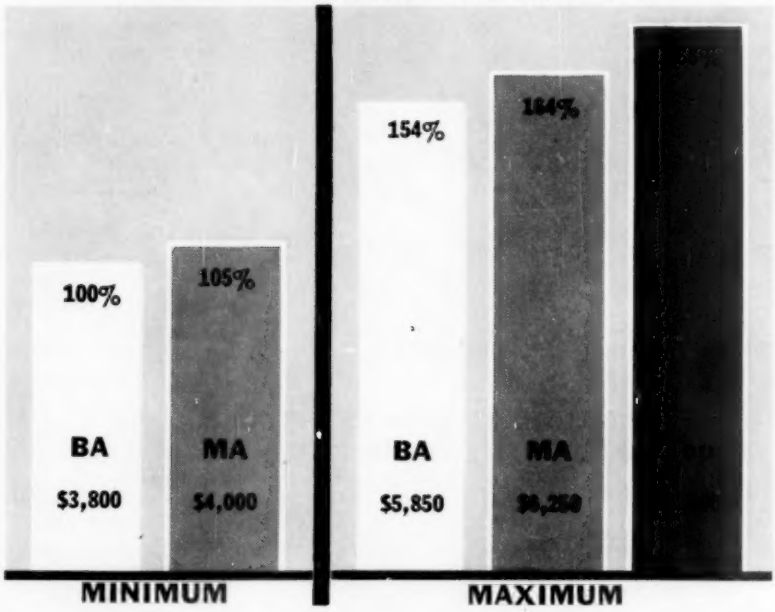
* Higher schedule has been approved for 1958-59.

Medians based on the January 1 data would be a little higher than the medians in the text, which are based on data received from all cities in September 1957.

** Board action in Cincinnati, retroactive to January 1, raised all salaries by $50.

4 HOW MUCH IS A TEACHER PAID FOR PREPARATION AND EXPERIENCE?

Urban School Districts 100,000-500,000 in Population, Medians of Scheduled Salaries, 1957-58



than the beginner receives. The percents are similar in Groups I and III.

SUPER-SALARIES FOR "MERIT"

Merit ratings as a factor in fixing teachers' salaries continue to be a basis for argument. About 1 in 13 of the 1957-58 schedules in urban districts over 30,000 in population has such a provision. This low percent is up a little from five years ago, but is far down from the 1940's.

Thirty-three salary schedules (about 8 percent) had superior-service maximums in 1957-58. Half of these authorize but do not require merit pay.

MINIMUM SALARY LAWS

Salaries for teachers have been shored up to a guaranteed minimum by state law in 33 states. Alaska, Hawaii, and Puerto Rico have also guaranteed salaries by statute.

In 20 of these areas, minimum salaries are higher in 1957-58 than a year ago. Even so, the amounts are extremely low. Of the 36 areas, 17 require less than $3000 for a beginning teacher with a B.A., and only two require as much as $4000; the median is $3000.

The law requires certain increments for experience in 22 of the 36 areas. For an experienced teacher with a master's degree, only seven areas require as much as $5000. The median is $4564.

Minimum-salary laws are intended not to hold any local community down to a uniform level; local districts may pay more. But these laws seek to make sure that nowhere in the state will salaries fall below an acceptable amount.

STATISTICS FOR 1957-58

Enrollments, salaries, and expenditures up

THIS YEAR the estimated enrollment in public elementary and secondary schools is 33.5 million, about 1.24 million more than last year. Persons comprising the instructional staff now total 1.3 million. The average annual salary of classroom teachers is $4520.

Other predictions for the school year 1957-58, as compared with 1956-57, are reported in the NEA Research Division's November 1957 release, *Advance Estimates*. High lights of this report follow:

- Average salary of instructional staff members (classroom teachers, principals, supervisors, librarians, counselors, and others): $4650—up 6.9 percent over last year
- Total expenditures, including capital outlay, interest, and debt retirement: $12,883,714,000—up 9.8 percent; total current expenditures, excluding capital outlay, interest, and debt retirement: $9,547,320,000—up 10.2 percent
- Current expenditures per pupil in average daily attendance: $320—up 6.7 percent
- Number of classroom teachers employed: 1,240,424—up 4.2 percent
- Emergency teachers employed: 87,319—up 0.8 percent
- Number of school districts: 49,477—down 7.0 percent.

ENROLLMENTS

Throughout the past decade enrollment in public elementary and secondary schools has been increasing at the rate of about 1,000,000 per year. The present estimated total, 33,508,814, is almost 40 percent larger than 10 years ago. Each year, the typical school district is having to provide for about four additional pupils for every 100 who were in school the preceding year.

In percentages, secondary-school enrollments are now going up faster than elementary-school enrollments. The increase of this year over last year was 4.4 percent in secondary grades and 3.6 percent in elementary grades.

SALARIES

Over the last few years the average salary of instructional staff members has increased annually about 6 percent.

1 ENROLLMENTS IN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

Year	Enrollment	Percent of increase over previous year	Percent of increase over 1947-48
1947–48	24,101,300	...	...
1948–49	24,653,383	2.3%	2.3%
1949–50	25,185,436	2.2	4.5
1950–51	25,794,510	2.4	7.0
1951–52	26,711,656	3.6	10.8
1952–53	27,532,435	3.1	14.2
1953–54	28,916,703	5.0	20.0
1954–55	29,966,052	3.6	24.3
1955–56	31,141,338	3.9	29.2
1956–57	32,268,459	3.6	33.9
1957–58	33,508,814	3.8	39.0

2 TYPE AND LOCATION OF PUBLIC-SCHOOL TEACHER SHORTAGE

Type and location of shortage	Number of states reporting teacher shortage as:		
	Some	Small	Large
RURAL TEACHERS:			
ELEMENTARY	[illegible]	2	15
SECONDARY	[illegible]	9	1
SPECIAL	[illegible]	2	8
URBAN TEACHERS:			
ELEMENTARY	[illegible]	13	6
SECONDARY	[illegible]	27	...
SPECIAL	[illegible]	10	6

This year's average of $4650 is a gain of 76.2 percent over the 1947-48 average of $2639.

But these gains have been offset sharply by increases in the cost of living. Today's average salary of instructional staff is equal to $3840 in 1947-49 dollars and to $2296 in 1935-39 dollars. (See pages 5 to 8 for more information on salaries.)

TEACHER SUPPLY AND DEMAND

The imbalance between teacher supply and demand continues. In the fall of 1957 the demand stood at an estimated 227,500 for normal turnover needs, cutting class size, meeting enrollment increases, adding services, and replacing the unprepared. To meet this demand, the colleges produced the preceding year slightly less than 100,000, 30 percent of whom would probably not take teaching jobs.

Slight, although inadequate, gains were recorded in teacher education enrollments. Forty-three states reported enrollments larger than before World War II, but only 25 gave this estimate in 1948-49.

None of these states expects an oversupply of graduating teachers from colleges within the next three years though one state is anticipating a balanced supply of elementary-school teachers.

The outlook for a balanced supply of secondary-school teachers is slightly more hopeful. This, six states expect to achieve despite the current trend of

3 RATIO OF EMERGENCY TEACHERS TO TOTAL TEACHERS

Year	Emergency teachers	Total number of classroom teachers	Ratio
1947–48	112,401	860,678	1:8
1948–49	105,267	865,178	1:8
1949–50	95,146	904,439	1:10
1950–51	75,079	927,617	1:12
1951–52	69,848	956,458	1:14
1952–53	69,626	992,583	1:14
1953–54	78,950	1,024,747	1:13
1954–55	80,674	1,080,329	1:13
1955–56	79,403	1,127,101	1:14
1956–57	86,616	1,190,865	1:14
1957–58	87,319	1,240,424	1:14

4 CURRENT EXPENDITURES PER PUPIL IN AVERAGE DAILY ATTENDANCE

Year	Amount	Percent of increase over previous year	Percent of increase over 1947-48
1947–48	$181.48		
1948–49	197.65	8.9%	8.9%
1949–50	210.34	6.4	15.9
1950–51	224.23	6.6	23.6
1951–52	247.36	10.3	36.3
1952–53	235.48*	−4.8	29.8
1953–54	268.42	14.0	47.9
1954–55	264.58*	−1.4	45.8
1955–56	280.00*	5.8	54.3
1956–57	300.00*	7.1	65.3
1957–58	320.00*	6.7	76.3

* NEA Research Division estimates

secondary-school enrollments increasing faster than elementary-school enrollments.

Just as the outlook for teacher supply varies from state to state so does the teacher shortage vary within states and among states. Rural schools are harder pressed than urban schools. And the pinch tends to be more acute in the elementary school than in the secondary school.

EMERGENCY TEACHERS

Another indication of the continued shortage of teachers can be seen in the number of emergency teachers employed. The number this year is estimated at 87,000, about three-fifths of whom have less than four years of college preparation.

Ten years ago, 112,401 teachers out of 860,678 held an emergency credential—a ratio of 1 to 8. The situation improved rapidly until 1951-52 when the ratio was 1 to 14. Since that time the proportion has not changed significantly. The ratio for the current year is still 1 to 14.

TEACHER TURNOVER

In 1957-58 approximately 116,000 teachers (8.7 percent) will leave teaching jobs in the states where they are now employed. About 19 percent of these teachers will migrate to another state where some will continue to teach. Another 31 percent will leave for marriage or maternity. Some 15 percent will retire because of age or disability. Approximately 13 percent will leave to enter other types of employment. The remaining 22 percent will leave for a variety of miscellaneous reasons: to attend college, to travel, or because of a temporary or permanent dislocation.

CURRENT EXPENDITURES

Current annual costs per pupil in average daily attendance have increased from $181 to $320 in the last 10 years. For the past three years the gain per year has been approximately $20.

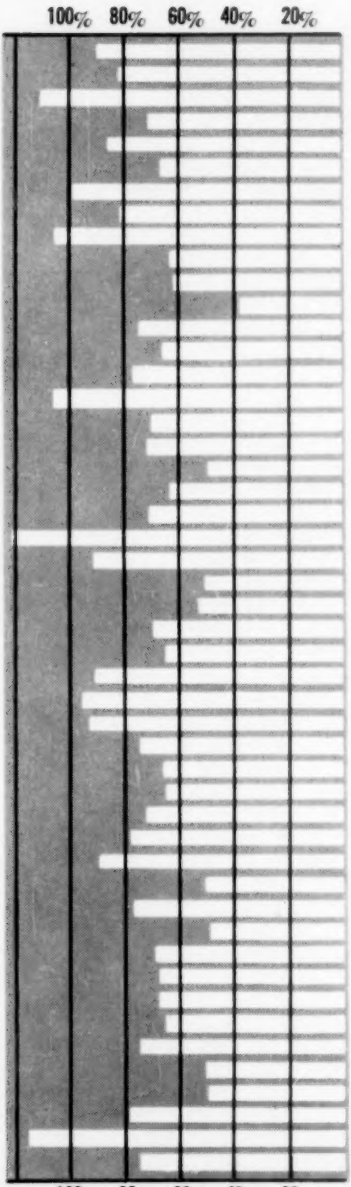
Such costs still vary widely from one state to another. This year five states will spend $400 or more per pupil (one almost $500), but four will spend less than $200.

SOURCES OF REVENUE

The local tax base will furnish a slightly smaller proportion of public school revenue than last year, and the states' share will be a little higher than at any time in the last 10 years.

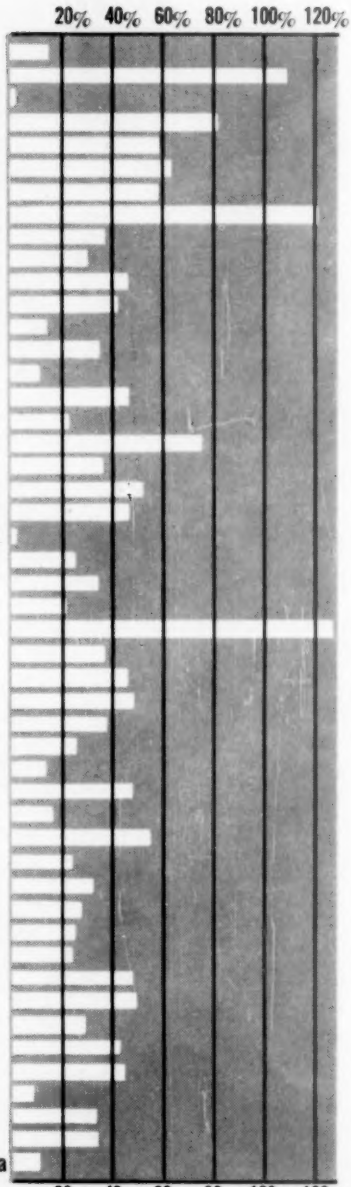
Out of $100 of school revenue this year, $55.80 comes from local sources, $40.60 from state sources, and $3.60 from federal sources.

5 PERCENT OF INCREASE IN COSTS PER PUPIL 1947-48 TO 1957-58*



* Current costs (excluding capital outlay, interest, and debt retirement) divided by average daily attendance

6 PERCENT OF INCREASE IN SCHOOL ENROLLMENTS 1947-48 TO 1957-58*



Alabama
Arizona
Arkansas
California
Colorado
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Delaware
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Georgia
Idaho
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Indiana
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Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
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Virginia
Washington
West Virginia
Wisconsin
Wyoming
District of Columbia

* For public elementary and secondary schools.

TEACHERS FOR OUR COLLEGES

Status of supply and demand

How to balance the supply of competent teachers with the growing demand—a problem that has plagued the elementary and secondary schools for many years—now looms as a critical challenge to colleges and universities.

A report just released by the NEA Research Division shows that institutions of higher education are steadily losing ground. They are being forced to employ, as new teachers, many persons with inadequate preparation at the very moment the nation's need for better teaching reaches new heights. These facts stand out in the report:

- Two of every 5 doctor's degree graduates are already employed in occupations in which they continue after graduation. Of the doctor's degree graduates who enter new occupations, 2 of every 5 take jobs outside the educational field, and not all the others become college teachers.
- The percent of doctor's degree graduates entering college teaching is high in such fields as English, foreign languages, health and physical education, home economics, social sciences, and fine arts; most graduates in physical sciences, engineering, and psychology pass over teaching to enter other occupations.
- Despite their search for highly trained candidates, college administrators have been forced during the past four years (for which definite figures are available) to lower their standards each year. Of all new full-time teachers employed in 1953-54, 31.4 percent held the doctor's degree; in 1956-57 the number fell to 23.5 percent.
- At the other extreme, 18.2 percent of the new full-time teachers employed in 1953-54 had not yet earned master's degrees; in 1956-57 this figure was 23.1 percent.
- While colleges are being forced to accept as new full-time teachers many persons with incomplete preparation, only about half the institutions can provide any kind of assistance to staff members to continue their academic preparation.
- By tradition, college teaching has been a man's job; in 1953-54, 78.2 of all full-time teachers in all types of colleges and universities were men. Of the new teachers employed during the past four years, about 3 of every 4 were men. College officials, however, indicate a growing interest in qualified women as prospective teachers of many subjects. This indicates an expanding field of professional opportunity and provides new incentive for women to pursue advanced graduate work.
- The fact that college employing officials are being priced out of the market is now clear; a substantial number of teaching positions in a wide variety of subjects remained vacant last year because the salaries offered could not attract acceptable candidates.

SUPPLY OF COLLEGE TEACHERS

Each college employing official sets his own standards as regards the qualifications of acceptable candidates; he is not governed by licensing regulations as is the employer of elementary- and secondary-school teachers. His ambition, therefore, would naturally be to build up the college staff with holders of high-level degrees. First in focus are those who have earned the doctor's degree, then those with the master's degree who have continued their graduate study and are well along toward the doctorate. A third choice would be those who have achieved master's degree status, and finally, those of lesser academic attainments.

Destination of New Doctorates

On the surface, the fact that almost 9000 doctor's degrees are now granted per year is encouraging. The investigation brought out, however, that many of the recipients are already fully employed in occupations in which they continue after graduation. Chart 1 shows that almost 2 of every 5 are in this way removed from the apparent "supply," and thus the number who actually enter new employment is reduced to less than 5400.

But the chart also shows that, of those entering new occupations, some 2 of every 5 take jobs outside the educational field—in industry, business, government, military service, and self-employment. This means that the class of 9000 new doctor's degree graduates netted the educational world only about 3250 new professional workers. Of these, about 8 of every 9 entered college instructional service.

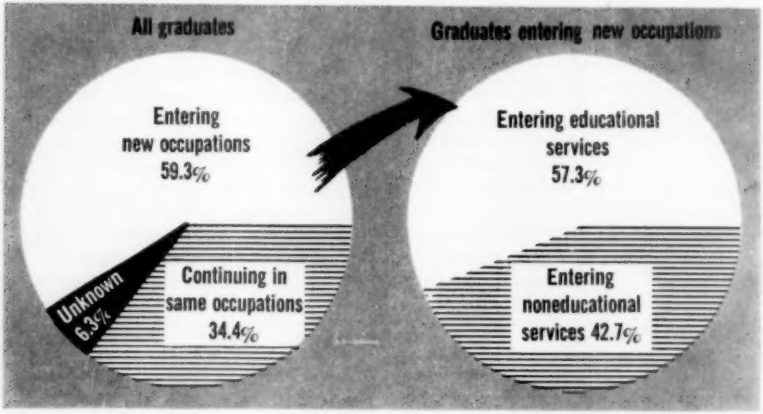
New Doctorates by Fields

Almost as important as total numbers is the distribution of these new comprehensively trained teachers among the teaching fields. Of those graduates entering new occupations, nearly all the majors in some fields become college teachers; almost all those prepared in other fields take jobs outside educational service of any kind.

Chart 2 indicates this: Of those entering new occupations, about 9 of every 10 new graduates in English, foreign languages, education, fine arts, home economics, physical and health education, and the social sciences go into educational work. A good majority of those prepared in biological science, mathematics, and agriculture do likewise. This is not true, however, of those prepared in engineering, chemistry, physics, and the other physical sciences. Other occupations capture almost three-fourths of the new doctorates in these fields. It is not surprising, then, that the colleges are not turning out a good supply of competent science teachers for the high schools.

It is important to note at this point that the employer of college teachers is limited only by the funds at his disposal and his own standard of qualifications. All of the vast number of graduates at all levels are, *in theory*, at his disposal. A detailed examination of the statistics on total degrees conferred does no

1 OCCUPATIONS OF DOCTOR'S DEGREE GRADUATES OF 1954-55 AND 1955-56 [a]



[a] Based on reports from 117 of 146 institutions granting this degree.

2 DOCTOR'S DEGREE GRADUATES OF 1955 AND 1956 WHO ENTERED NEW OCCUPATIONS, BY FIELD OF PREPARATION

Field of preparation		Percent entering educational service	Percent entering noneducational service
Agriculture	290	63.1	36.9
Biological sciences	399	67.9	32.1
Education (Ph.D.)	225	87.6	12.4
Education (Ed.D.)	459	90.4	9.6
Engineering	314	27.4	72.6
English	171	92.4	7.6
Fine arts:			
Music	25	84.0	16.0
Speech and dramatics	83	86.7	13.3
All other fine arts	14	85.7	14.3
Foreign languages	94	90.4	9.6
Geography	29	79.3	20.7
Health and medical sciences	239	55.6	44.4
Home economics	28	89.3	10.7
Industrial and vocational arts	6	83.3	16.7
Journalism	4	100.0	
Law	2	50.0	50.0
Library science	5	100.0	
Mathematics	163	67.5	32.5
Philosophy	46	80.4	19.6
Physical and health education	38	94.7	5.3
Physical sciences:			
Chemistry	940	25.7	74.3
Physics	362	40.6	59.4
All other physical sciences	174	31.6	68.4
Psychology	531	38.6	61.4
Religion	116	67.2	32.8
Social sciences:			
Basic			
Economics	86	68.6	31.4
History	133	90.2	9.8
Political science	100	85.0	15.0
Sociology	105	79.0	21.0
Applied			
Business and commerce—accounting	4	100.0	
Business and commerce—all other	47	74.5	25.5
All other social sciences	51	72.5	27.5
Miscellaneous	24	50.0	50.0
Total	5,307	57.3	42.7

more, however, than provide background.[1]

Supply Shown Indirectly

The best way yet devised to describe the "supply of college teachers" is to identify those who have come from all sources outside the college teaching corps the preceding year and to examine their qualifications in terms of academic preparation. These persons comprised the "supply" that was available at the salaries offered. In other words, they responded to the "demand" for college teachers as the demand was satisfied through their employment. The next step is to group them according to (a) the teaching fields they enter, (b) their sex, and (c) the sources from which they came.

DEMAND FOR COLLEGE TEACHERS

In the investigation being reported here the NEA Research Division identified the new teachers employed during the past two years in a majority of institutions of all types. In a similar study reported in 1955[2] the new teachers employed in 1953-54 and 1954-55 were identified. Thus, a four-year record is now available. The distribution of these new full-time teachers among the teaching fields is indicated in Chart 3.

Fine arts (including music) and the social sciences consistently hold top place in the number of new teachers inducted into service although these fields fell slightly in percentage from 1953-54 to 1956-57. Engineering staged the largest gain, from 7.5 to 8.9 percent over the 4-year span. The physical sciences and mathematics, despite the focus of public attention upon them, increased only a little in their percents of all newly employed teachers.

A change in the distribution of new teachers among the teaching fields might be brought about by (a) the withdrawal of teachers who must be replaced or (b) the shift of interests of students which would necessitate the opening of additional classes in some fields and permit the closing of classes in others. No data are available to indicate the force of these factors.

Sources of New Teachers

Information concerning the sources of new full-time college teachers employed in 1955-56 and 1956-57 is shown in Chart 4. More of these new teachers came directly from graduate school than from any other source. Contrary to widespread belief, however, this group was less than half the total—45.2 percent. But the different types of institutions varied widely in their dependence upon this source. The nonpublic universities and most of the nonpublic colleges drew fully one-half of their new teachers from this reservoir. The state universities and land-grant colleges took about 45 percent and state colleges 42 percent, but the teachers colleges took only 3 of every 10 new teachers (29.4 percent) directly from the graduate schools.

Next in popularity as a source of supply was the corps of high-school teachers. The nonpublic universities largely ignored this source (with only 6.6 percent), but the teachers colleges recruited almost 4 of every 10 new teachers (37.6 percent) directly from the high-school classroom. In addition, the teachers colleges took 4.1 percent of their new teachers from junior colleges, 6.0 percent directly from elementary-school classrooms, and 4.9 percent from school administration. These percents, totaling 52.6, show that employing officials in teachers colleges are sensitive to the value of firsthand experience in meeting the problems of elementary and secondary schools as a qualification for training future teachers.

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[1] The reader is referred to the October 1957 issue of the *Research Bulletin* entitled "The Postwar Struggle To Provide Competent Teachers." Figures II, VIII, and IX present a 20-year review of degrees conferred and bring to light certain relationships between the groups of graduates at the bachelor's, master's, and doctor's degree levels, separately by sex.

[2] National Education Association, Research Division. "Teacher Supply and Demand in Degree-Granting Institutions, 1954-55." *Research Bulletin* 33: 127-63; December 1955.

3 DISTRIBUTION OF NEW FULL-TIME TEACHERS EMPLOYED BY 656 COLLEGES AND UNIVERSITIES IN 1953-54 AND 1954-55 AND BY 827 INSTITUTIONS IN 1955-56 AND 1956-57, BY GENERAL FIELD OF TEACHING

General field of teaching	New full-time teachers employed in:							
	1953-54		1954-55		1955-56		1956-57	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1	2	3	4	5	6	7	8	9
Agriculture	175	4.1%	199	4.2%	258	4.1%	316	3.8%
Biological sciences	233	5.4	233	4.9	340	5.4	426	5.1
Business and commerce	201	4.7	261	5.5	367	5.8	476	5.7
Education	342	7.9	351	7.4	506	8.0	634	7.6
Engineering	321	7.5	389	8.1	583	9.2	739	8.9
English	373	8.7	380	8.0	609	9.6	800	9.6
Fine arts	443	10.3	541	11.3	651	10.3	773	9.3
Foreign languages	146	3.4	188	3.9	225	3.5	305	3.7
Geography	22	0.5	19	0.4	37	0.6	44	0.5
Health sciences*	238	5.5	280	5.9	232	3.6	333	4.0
Home economics	143	3.3	135	2.8	148	2.3	199	2.4
Industrial and vocational arts	64	1.5	49	1.0	98	1.5	128	1.5
Journalism	22	0.5	23	0.5	37	0.6	36	0.4
Law	22	0.5	24	0.5	42	0.7	65	0.8
Library science	82	1.9	94	2.0	118	1.9	166	2.0
Mathematics	193	4.5	208	4.4	304	4.8	411	5.0
Philosophy	60	1.4	60	1.2	79	1.2	99	1.2
Physical and health education	252	5.9	246	5.2	356	5.6	462	5.6
Physical sciences	342	7.9	407	8.5	499	7.9	695	8.4
Psychology	117	2.7	144	3.0	130	2.0	217	2.6
Religion	71	1.6	75	1.6	99	1.6	170	2.1
Social sciences	441	10.2	456	9.6	614	9.7	812	9.8
Other	3	0.1	6	0.1	5	0.1	2	*
All fields of teaching	4,306	100.0%	4,768	100.0%	6,337	100.0%	8,308	100.0%

* Does not include dentistry and medicine.
* Less than 1/10 of 1 percent.

Chart 4 shows that an encouraging number of new teachers can be recruited from business occupations. In general, these persons go to the multiple-unit institutions. Municipal universities took 28.1 percent from this source; state universities, 16.6 percent; nonpublic universities and land-grant colleges, 15.4 percent. At the other extreme, teachers colleges pulled only 3.9 percent of their new teachers from this source, and the small nonpublic colleges limited their recruitment to less than 10 percent.

None of the other sources contributed as much as 1 in 25 new teachers, but it is disturbing that persons coming into full-time college instructional service directly from the preceding bachelor's degree class made up 3.2 percent of the total.

Qualifications of New Teachers

Through the 1955 and the 1957 studies the Research Division has brought to light an alarming body of evidence—proof that college and university staffs are suffering a steady deterioration, as indicated by the formal preparation of newly employed full-time teachers. The drop in quality runs through all fields of instruction and is suffered by all types of institutions. This stands in sharp contrast to the progress achieved by the elementary schools during the past decade, where the academic preparation of the typical teacher has been extended by one full year of college attendance.

Chart 5 tells a dramatic story. Starting with 1953-54 (the first year for which the data are available), it shows that 40.5 percent of the *total full-time staff* at all professional ranks and in all types of degree-granting institutions held the earned doctor's degree. Of the newly employed full-time staff members that year, 31.4 percent were also at that level of academic achievement. One year later only 28.4 percent of the new staff members possessed the doctor's degree; in 1955-56, only 26.7 percent; and in 1956-57, only 23.5 percent. *In a period of three years there has been a drop of 25.2 percent in the group of new teachers holding the doctor's degree.*

At the other extreme is the employment of full-time teachers who had not yet achieved master's degree status. Of

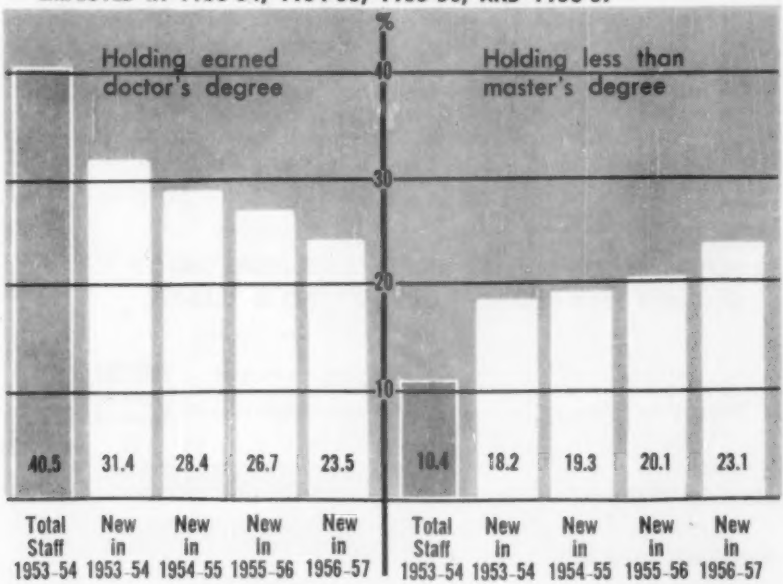
4 PERCENT OF NEW FULL-TIME TEACHERS APPOINTED IN 1955-56 AND 1956-57, BY SOURCE OF APPOINTEES AND BY TYPE OF INSTITUTION

Source of new teachers	TYPE OF INSTITUTION							
	All institutions	State universities	Nonpublic universities	Municipal universities	Land-grant colleges	State colleges	Teachers colleges	Nonpublic colleges
Graduate school	45.2%	45.9%	50.5%	47.0%	44.2%	41.8%	29.4%	47.7%
Bachelor's degree class	3.2	4.9	1.4	3.9	6.5	1.5	2.1	3.8
Junior-college teaching	2.6	1.6	1.1	1.0	1.7	4.7	4.1	3.3
High-school teaching	13.8	8.2	6.6	7.5	7.6	20.0	37.6	15.9
Elementary-school teaching	1.3	0.7	0.9	0.7	0.7	2.5	6.0	0.6*
School administration	2.7	1.6	1.9	1.4	1.9	4.1	4.9	3.3
Research (both educational and noneducational)	1.8	2.4	3.8	0.4	2.8	0.7	0.3	1.1
Other educational service	3.7	2.9	4.4	2.1	2.7	3.0	4.9	4.4
Homemaking	1.5	0.9	0.9	1.8	1.2	1.8	3.2	1.6
Religious service	0.9	*	1.5	0.4	*	....	0.3	2.5
Business occupations	13.5	18.6	15.4	20.1	15.4	12.3	3.9	9.8
Government service (civilian)	3.7	6.3	3.5	2.5	6.1	3.7	1.8	2.1
Military service	2.7	2.8	3.4	2.8	3.5	2.2	1.1	2.2
Miscellaneous (noneducational)	3.4	5.0	4.7	0.4	5.7	1.7	1.2	2.5
All sources	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Number of institutions reporting[a]	810	65	76	11	58	100	92	448

[a] Includes 34 state universities and one nonpublic university which are also land-grant colleges.

* Less than 1/10 of 1 percent.

5 PERCENT OF FULL-TIME TEACHING STAFF AT HIGH AND LOW LEVELS OF PREPARATION (1953-54), COMPARED WITH NEW FULL-TIME TEACHERS EMPLOYED IN 1953-54, 1954-55, 1955-56, AND 1956-57



the total full-time staff in 1953-54, only 10.4 percent were counted in this group; and of those newly employed that year, only 18.2 percent. But in 1954-55 it was 19.3 percent of the newly employed, in 1955-56 it was 20.1 percent, and in 1956-57 no fewer than 23.1 percent were at this modest level of preparation. Without question, the institutions of higher education are steadily losing their battle to retain present quality of instructional staff, to say nothing of the need to build to higher levels.

Variations by Institutions

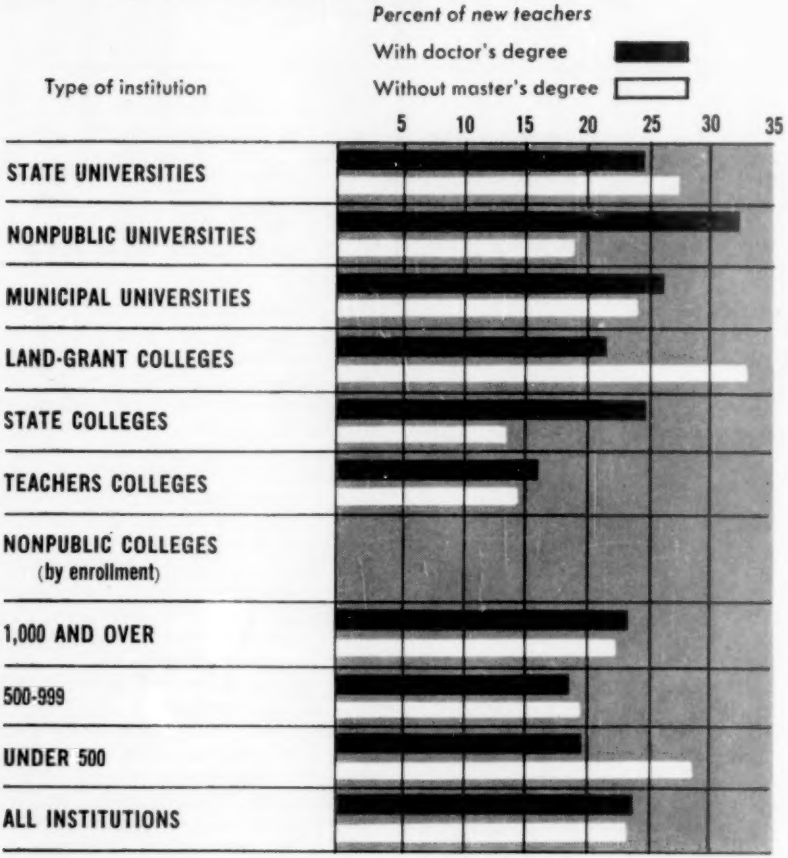
There is probably greater diversity of practice among institutions of one type than among the nine different types of institutions shown in the report. Nonpublic universities are a case in point. Of all new full-time teachers employed by all institutions in this group in 1956-57, just 32.5 percent held the doctor's degree. Yet two great nonpublic universities reported that during the past two years they had employed 81 and 62 new teachers and that *every one of these 143 new teachers held the doctor's degree*. This means that in these days of keen competition with other occupations for competent personnel, the more fortunate institutions are forging ahead at the expense of those of more limited resources. In reality, the drift is more sharply toward a large number of the colleges being relegated to the level of second-class institutions. Such a tragedy would point to a second-class education for the growing percent of that vast group of young men and women soon to crowd the campuses.

This report makes no attempt to group the institutions according to their ability to compete for superior talent. Chart 6 does, however, show how the different types of institutions, as groups, fare in the competition. The range in

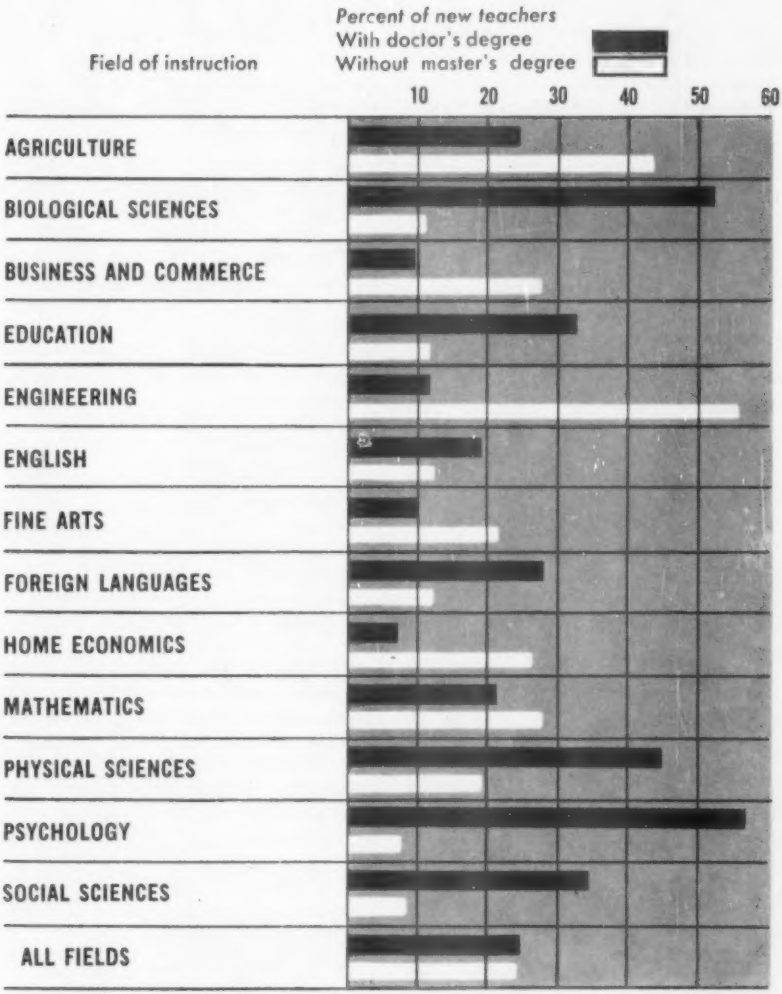
percent of new full-time teachers holding the doctorate is from 32.5 to 15.7. These figures alone do not tell the whole story. Also to be considered is the percent of new teachers accepted for full-time assignments who had not yet earned the master's degree. Many of the institutions taking on a large percent of their new teachers without the doctorate tend to balance up by more rigidly limiting the number below the master's degree level to be employed.

This is particularly true in the case of teachers colleges. These institutions, low in percent (only 15.7) of new doctor's degree holders, are also low (along with state colleges, many of which were recently teachers colleges) in accepting new teachers with minimum preparation. Last year they took only 14.9 percent, while land-grant colleges took one-third (33.2 percent) of their new teachers from the pool of nonmaster's degree holders.

6 PERCENT OF NEW TEACHERS WITH DOCTOR'S DEGREE AND WITH LESS THAN MASTER'S DEGREE EMPLOYED IN 1956-57



7 PERCENT OF NEW TEACHERS WITH DOCTOR'S DEGREE AND WITH LESS THAN MASTER'S DEGREE EMPLOYED IN 1956-57



Variations by Teaching Fields

As the institutions compete with other occupations and among themselves for the limited supply of specialized talent, the quality of instruction offered in the different fields merits examination. From the time of their introduction into the college curriculum certain subjects have commanded the attention of the best scholars. Other subjects, meanwhile, for quite valid reasons, have been assigned to teachers of lesser academic attainments but more practical, firsthand contact with the vocational aspects of the subject. As an

example, the competent teacher of engineering might very well compensate for lack of a doctor's degree with a rich background of practical experience which he draws upon for apt illustrations. The college career teacher of biology, on the other hand, is likely to continue without interruption his studies to the doctorate at the earliest opportunity.

Thus, the picture presented in number 7 should be interpreted with certain limitations. The possession of the doctor's degree should not be blindly regarded as a qualification of equal value in all fields of college instruction. Even so, it is sobering to note the extremes to which the colleges have been driven to staff their classrooms in certain fields. The full report of the Research Division shows that the group of new teachers employed in 1956-57 ranked unfavorably with the groups employed in the three preceding years *in all fields of instruction*. In each case the percent of new teachers at the top of the preparation ladder decreased, and in almost all fields the number at the bottom increased.

The evidence is now clear that the higher educational institutions are at the crossroads. They have already sustained serious losses in the quality of their staffs, and a reversal of the downtrend is not in sight.

WOMEN AS COLLEGE TEACHERS

The contribution of women to the cause of education depends upon the grade level of instruction being considered. At the elementary-school level almost 9 of every 10 (87.2 percent) public-school teachers are women. In the public high school the division is almost even, with 53.7 percent being women. But at the college and university level tradition has classified teaching as a man's job. Thus one may well ask: Can women help relieve the present and probable future shortage? And if so, in what fields of instruction?

The fact is clear that women have not at any time contributed significantly to the new supply of graduates at the doctorate level. Perhaps the fields in which they have concentrated may be compared with (a) availability for college teaching and (b) their acceptance as candidates. The U. S. Office of Education report on degrees conferred shows this distribution of the 885 women who received the earned doctor's degree in 1956:

Agriculture	6
Biological sciences	117
Education	282
English and journalism	59
Fine arts	31
Foreign language and literature	50
Geography	3
Health professions	7
Home economics	28
Library science	1
Mathematics	10
Philosophy	5
Physical sciences	68
Psychology	86
Religion	15
Social sciences	109
Miscellaneous	8
Total	885

This distribution suggests that fields chosen by women seeking the doctor's degree have little or no relation to the need for college teachers. For example, only 10 women in the 1955-56 class majored in mathematics although (a) mathematics is widely advertised as a field of acute shortage and (b) women's success as teachers of mathematics at the high-school level enjoys general recognition. And in physics, of 470 graduates, only eight are women.

Since women comprise one-third of the master's degree class, why do they fall to a mere tenth of the higher-level graduates? Could their numbers be meaningfully increased, to the profit of colleges and universities, by a program of planned encouragement? The evidence is lacking that this potential source of supply has been fully explored.

Improving the Property Tax

States move toward equalization

STUDIES of property assessments in 16 states indicate that state-wide average assessment ratios range from less than 20 to almost 58 percent of market value. Even within a single state, the county-wide ratios vary from 32 to 80 percent.

These facts concern educators because the property tax is the most productive source of local revenue for public education. In 1956, it produced 86 percent of the school funds collected locally and about half of all school revenue.

The property tax also serves an equally important, though less tangible, purpose: It stimulates the individual citizen's interest in education and encourages local responsibility for the school program.

ASSESSMENT PROBLEMS

Assessment at a fraction of market value is one of two major problems in property tax administration. The other is to bring about equity in property assessments.

Inequities—assessments at varying ratios to full value—exist among pieces of the same type of real property, among classes of property, and among the assessments of the taxing districts within counties and among the counties of a state.

Inequities and debased property assessments:

- Fail to produce the revenue potential from real property for support of local government including education
- Fail to measure accurately local fiscal capacity on which to base the distribution of state funds to schools
- Foster attitudes hostile to schools when taxes are inequitable and high.

EQUALIZATION TRENDS

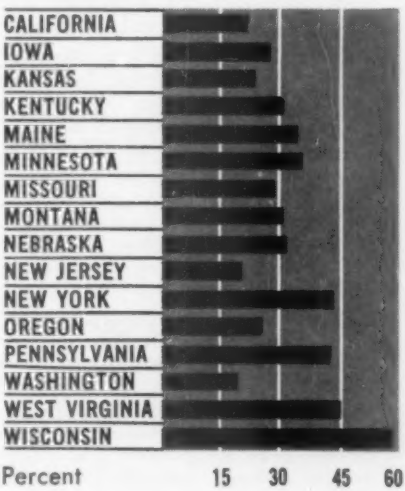
Despite continued pressure from special-interest groups, many local communities and counties are moving toward equalization. In 1952, 43 states indicated a need for such programs; by 1955, at least 19 states had adopted some type of equalization program.

State equalization programs may:

- Result in an order to change local assessment to a percent of value set by the state assessment agency (9 of the 19 states have done this)
- Merely use the equalized assessments for the levy of a state property tax or for the distribution of state school funds, thus leaving unchanged the assessment for local tax purposes.

A corps of professional assessors is basic to improvements in assessments. Most states now offer assistance to local assessors through inservice training, field consultation, and improved techniques and tools.

1 AVERAGE STATE-WIDE ASSESSMENTS AS PERCENT OF MARKET VALUE IN SIXTEEN SELECTED STATES



THE STATES AND EDUCATION

Ability, burden, effort, achievement

ASSESSING a state's system of public education is a complex task. The results are inexact and incomplete. Even an approximation must rest on the answers to four fundamental questions:

- What is a state's ability to support public education? What wealth is available and how may it be tapped?
- What is the education burden? What segment of the population must be served?
- What efforts are made? To what extent are people willing to pay for public schools?
- What do the states achieve? Are the results consistent with their abilities, their burdens, and their efforts?

Rankings of the States, a recent NEA Research Division publication, has some applicable data.

A PROBLEM IN MEASUREMENT

Caution is the word when studying any of the 30 tables of statistics in this special report. A single measure may be both inadequate and misleading. For example, knowing only that Billy Jones is 62" tall would tell us little about his level of growth and development. We would need to know his age, his weight, his body configuration, and then be able to project this information against what most of his age mates seem to be like.

Accordingly, only as several measures of the states are combined, may meaning develop. Here is a discussion of some of these measures.

ABILITY TO FINANCE EDUCATION

Personal income payments and retail sales are two measures of a state's ability to finance public education.

Personal income payments per pupil enrolled is the total income received by persons within a state divided by the number of pupils enrolled in its public schools. Two factors influence these figures: a state's general level of economy and the percentage of its school-age population either not attending school or attending a nonpublic school. Both these factors should be kept in mind in appraising what the states are doing.

The range in these figures is great. Each pupil in Delaware's public schools is backed by almost five times as many personal-income dollars as is each pupil in Mississippi.

Per-capita retail sales are a measure of what people spend for consumers' goods—food, clothing, furniture, cars, and gadgets. It suggests the extent of the jingle in the pocket. And, as a general rule, the high-income states appear to be the freer spending states.

THE BURDEN OF EDUCATION

A state's educational load is determined by the percentage of its population which is of school age and the proportion of this group enrolled in its public schools.

The states may be ranked by the percents of their total population enrolled in public schools. They may also be ranked on the basis of the number of school-age children per 1000 adults aged 21 to 64. (This last group is, ostensibly, the labor force—those who receive income and pay taxes.) Children are a higher proportion of the population in the agricultural states. Low income, high fecundity, and popular public schools are the three who are a crowd in many states. Another big factor is migration of the labor force out of many states.

For example, South Carolina, forty-seventh in personal income payments per pupil enrolled in public schools and in per-capita retail sales, is third in percent of population enrolled and second

in proportion of school-age children to adults aged 21 to 64. Conversely, New York, second in personal income payments per pupil enrolled in public schools and fourteenth in per-capita retail sales, is forty-sixth in percent of population enrolled and forty-eighth in number of children per 1000 adults aged 21 to 64.

EFFORTS MADE

A state's efforts to support public education can be assessed by determining what it spends and what it has to spend. This can be done by looking at its current expenditures per pupil and the percent of the personal income of its citizens which the total represents. Current expenditures per pupil in ADA range from $150 in Arkansas to $462 in New York; the national average is $300 (year 1956-57).

The higher expenditures tend to come from those states more favored in resources, with a lower percentage of the population enrolled in public schools, and with a predominantly older citizenry. And while there are exceptions, the reverse is mostly true of the less favored states.

New York is second in personal income per pupil enrolled in public schools; Arkansas is forty-sixth. New York has 14.9 percent of its population enrolled in public schools; Arkansas has 22.7 percent. And yet New York spends a greater percentage of personal income payments than Arkansas does.

When current expenditures for education are calculated as a proportion of personal income payments, a different alignment develops in the rankings of the states. Figured this way, many of those states low in per-pupil expenditures are very high in effort. South Dakota—thirty-fourth in personal income payments per pupil enrolled in public schools—leads all the states in one measure of effort to support education. Delaware—first in personal income per pupil—is forty-eighth. Generally speaking, the states with the least wealth make the proportionately greater effort.

WHAT THE STATES ACHIEVE

Two measures of school achievement are presented here. One ranks the states on the basis of the median years of education achieved by its adult citizens; the other lists the percentage of its youth disqualified by Selective Service because of mental disabilities. Both these measures may suffer from possible distortions. There is no way of knowing how many of the individuals represented are actually the product of a particular state's school system since so many people have moved from one state to another.

The Far West holds the leadership in the educational level of its citizens. Of the first 10 states in this ranking, eight are from this region. The lowest 10 are predominantly those states which are low in wealth but rich in children.

The best Selective Service records are found in the Northwest, the Middle West, and to a certain extent in New England. Montana leads—only 2.5 percent of its registrants were disqualified by the mental test. The national average is 17.5 percent. However, the great majority of those states with fewer than average rejectees are those which have more available wealth, spend more of that wealth on public education, and do not have the burden of pupil population facing the below-average states.

THE RANKINGS OF THE STATES

This review has discussed eight measures of public education in the United States in an attempt to assess the states. Actually, differences among schools within a state may equal or exceed the gross differences among the states.

Of course, these eight measures do not and cannot give exact, composite rankings. However, they do tend to show that the state that can find the money to meet its educational burden and to spend that money for that purpose, will probably come up with a superior educational product.

1 PERSONAL INCOME PAYMENTS PER PUPIL ENROLLED IN PUBLIC SCHOOLS, 1956-57

1.	DELAWARE	$17,432
2.	NEW YORK	15,097
3.	NEW JERSEY	14,986
4.	CONNECTICUT	14,952
5.	ILLINOIS	14,313
6.	RHODE ISLAND	13,697
7.	MASSACHUSETTS	13,403
8.	CALIFORNIA	12,337
9.	PENNSYLVANIA	12,152
10.	OHIO	11,818
11.	MARYLAND	11,663
12.	MICHIGAN	11,161
13.	NEW HAMPSHIRE	11,137
14.	WISCONSIN	10,963
15.	NEVADA	10,825
16.	MISSOURI	10,449
17.	WASHINGTON	10,161
	UNITED STATES	10,049
18.	INDIANA	9,524
19.	COLORADO	9,384
20.	OREGON	9,357
21.	MINNESOTA	9,169
22.	MONTANA	9,168
23.	VERMONT	8,461
24.	NEBRASKA	8,412
25.	IOWA	8,371
26.	WYOMING	8,361
27.	MAINE	8,290
28.	TEXAS	8,285
29.	FLORIDA	8,034
30.	KANSAS	7,883
31.	VIRGINIA	7,760
32.	NORTH DAKOTA	6,981
33.	LOUISIANA	6,955
34.	SOUTH DAKOTA	6,687
35.	ARIZONA	6,675
36.	IDAHO	6,658
37.	OKLAHOMA	6,651
38.	KENTUCKY	6,497
39.	UTAH	6,435
40.	NEW MEXICO	6,278
41.	WEST VIRGINIA	6,146
42.	TENNESSEE	5,969
43.	GEORGIA	5,534
44.	NORTH CAROLINA	5,495
45.	ALABAMA	5,177
46.	ARKANSAS	4,722
47.	SOUTH CAROLINA	4,660
48.	MISSISSIPPI	3,754

2 PER-CAPITA RETAIL SALES, 1956

1.	NEVADA	$1,581
2.	CONNECTICUT	1,376
3.	DELAWARE	1,366
4.	CALIFORNIA	1,356
5.	FLORIDA	1,344
6.	ILLINOIS	1,292
7.	OHIO	1,290
8.	MONTANA	1,279
9.	WYOMING	1,248
10.	MASSACHUSETTS	1,240
11.	MICHIGAN	1,229
12.	COLORADO	1,227
13.	NEW JERSEY	1,221
14.	NEW YORK	1,212
15.	OREGON	1,208
16.	IOWA	1,203
17.	NEW HAMPSHIRE	1,188
18.	NEBRASKA	1,182
19.	WASHINGTON	1,182
20.	IDAHO	1,179
21.	WISCONSIN	1,176
22.	MINNESOTA	1,159
23.	VERMONT	1,144
24.	MISSOURI	1,143
	UNITED STATES	1,140
25.	MAINE	1,139
26.	INDIANA	1,130
27.	RHODE ISLAND	1,127
28.	ARIZONA	1,111
29.	NORTH DAKOTA	1,107
30.	NEW MEXICO	1,102
31.	TEXAS	1,093
32.	PENNSYLVANIA	1,087
33.	KANSAS	1,084
34.	MARYLAND	1,084
35.	UTAH	1,057
36.	OKLAHOMA	1,039
37.	SOUTH DAKOTA	985
38.	GEORGIA	928
39.	VIRGINIA	927
40.	LOUISIANA	915
41.	NORTH CAROLINA	911
42.	TENNESSEE	875
43.	WEST VIRGINIA	841
44.	KENTUCKY	790
45.	ARKANSAS	788
46.	ALABAMA	764
47.	SOUTH CAROLINA	741
48.	MISSISSIPPI	690

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3 PERCENT OF TOTAL POPULATION ENROLLED IN PUBLIC SCHOOLS, 1953-54

1.	UTAH	24.4%
2.	MISSISSIPPI	24.4
3.	SOUTH CAROLINA	23.9
4.	ALABAMA	23.3
5.	WYOMING	23.2
6.	NORTH CAROLINA	23.1
7.	IDAHO	22.9
8.	WEST VIRGINIA	22.7
9.	GEORGIA	22.7
10.	ARKANSAS	22.7
11.	NEW MEXICO	22.6
12.	NEVADA	22.6
13.	ARIZONA	22.1
14.	OKLAHOMA	22.0
15.	TENNESSEE	21.5
16.	KANSAS	20.5
17.	COLORADO	20.1
18.	KENTUCKY	20.0
19.	FLORIDA	19.8
20.	NORTH DAKOTA	19.6
21.	IOWA	19.6
22.	VIRGINIA	19.5
23.	INDIANA	19.4
24.	WASHINGTON	19.3
25.	OREGON	19.3
26.	SOUTH DAKOTA	19.3
27.	MAINE	19.3
28.	MONTANA	19.2
29.	LOUISIANA	19.2
30.	TEXAS	19.1
31.	NEBRASKA	18.5
	UNITED STATES	18.2
32.	MICHIGAN	18.2
33.	MINNESOTA	18.0
34.	CALIFORNIA	17.7
35.	OHIO	17.4
36.	MISSOURI	17.3
37.	MARYLAND	16.9
38.	VERMONT	16.8
39.	CONNECTICUT	16.4
40.	DELAWARE	16.1
41.	PENNSYLVANIA	16.0
42.	WISCONSIN	15.8
43.	NEW JERSEY	15.3
44.	NEW HAMPSHIRE	15.2
45.	ILLINOIS	15.1
46.	NEW YORK	14.9
47.	MASSACHUSETTS	14.7
48.	RHODE ISLAND	13.3

4 NUMBER OF SCHOOL-AGE CHILDREN (5-17) PER 1,000 ADULTS AGED 21-64, 1955

1.	MISSISSIPPI	624
2.	SOUTH CAROLINA	615
3.	NEW MEXICO	611
4.	ARKANSAS	570
5.	UTAH	569
6.	ALABAMA	563
7.	IDAHO	549
8.	NORTH CAROLINA	543
9.	WEST VIRGINIA	540
10.	GEORGIA	540
11.	KENTUCKY	539
12.	NORTH DAKOTA	532
13.	LOUISIANA	526
14.	ARIZONA	508
15.	WYOMING	497
16.	TENNESSEE	495
17.	SOUTH DAKOTA	494
18.	VIRGINIA	491
19.	MONTANA	489
20.	VERMONT	481
21.	OKLAHOMA	481
22.	MAINE	476
23.	TEXAS	472
24.	MINNESOTA	456
25.	IOWA	451
26.	COLORADO	448
27.	WASHINGTON	446
28.	WISCONSIN	436
29.	KANSAS	431
30.	INDIANA	430
	UNITED STATES	429
31.	NEBRASKA	429
32.	OREGON	426
33.	MICHIGAN	426
34.	NEW HAMPSHIRE	419
35.	MARYLAND	419
36.	FLORIDA	410
37.	OHIO	407
38.	MISSOURI	398
39.	NEVADA	394
40.	PENNSYLVANIA	389
41.	DELAWARE	389
42.	CALIFORNIA	385
43.	RHODE ISLAND	379
44.	MASSACHUSETTS	375
45.	ILLINOIS	374
46.	CONNECTICUT	366
47.	NEW JERSEY	352
48.	NEW YORK	339

5 ESTIMATED EXPENDITURES PER PUPIL IN ADA, 1956-57

1.	NEW YORK	$462.00
2.	NEW JERSEY	410.00
3.	WYOMING	400.00
4.	ILLINOIS	370.00
5.	OREGON	364.00
6.	NEVADA	362.00
7.	MONTANA	356.00
8.	MINNESOTA	355.00
9.	CALIFORNIA	344.00
10.	CONNECTICUT	344.00
11.	NEW MEXICO	340.00
12.	PENNSYLVANIA	335.50
13.	ARIZONA	333.25
14.	COLORADO	330.00
15.	WISCONSIN	330.00
16.	DELAWARE	326.00
17.	WASHINGTON	319.00
18.	MARYLAND	310.00
19.	OHIO	310.00
20.	RHODE ISLAND	310.00
21.	MASSACHUSETTS	303.00
22.	IOWA	300.00
23.	KANSAS	300.00
24.	MICHIGAN	300.00
	UNITED STATES	300.00
25.	LOUISIANA	295.00
26.	MISSOURI	287.27
27.	SOUTH DAKOTA	286.17
28.	INDIANA	285.00
29.	NEW HAMPSHIRE	285.00
30.	NORTH DAKOTA	285.00
31.	NEBRASKA	275.00
32.	TEXAS	260.00
33.	UTAH	258.00
34.	VERMONT	252.00
35.	FLORIDA	247.27
36.	OKLAHOMA	240.00
37.	IDAHO	236.00
38.	MAINE	210.00
39.	VIRGINIA	210.00
40.	WEST VIRGINIA	207.00
41.	GEORGIA	205.00
42.	SOUTH CAROLINA	192.00
43.	KENTUCKY	286.40
44.	ALABAMA	184.00
45.	NORTH CAROLINA	181.00
46.	TENNESSEE	168.00
47.	MISSISSIPPI	151.63
48.	ARKANSAS	150.00

6 CURRENT EXPENDITURES FOR PUBLIC EDUCATION FROM STATE AND LOCAL SOURCES AS A PERCENT OF PERSONAL INCOME PAYMENTS, 1956-57

1.	SOUTH DAKOTA	4.09%
2.	NEW MEXICO	4.06
3.	WYOMING	4.06
4.	NORTH DAKOTA	3.76
5.	LOUISIANA	3.69
6.	UTAH	3.52
7.	ARIZONA	3.48
8.	MINNESOTA	3.41
9.	MONTANA	3.37
10.	IOWA	3.34
11.	MISSISSIPPI	3.27
12.	OREGON	3.26
13.	SOUTH CAROLINA	3.22
14.	OKLAHOMA	3.09
15.	KANSAS	3.07
16.	IDAHO	3.04
17.	GEORGIA	3.01
18.	WEST VIRGINIA	2.95
19.	NEBRASKA	2.92
20.	VERMONT	2.91
21.	COLORADO	2.83
22.	ALABAMA	2.81
23.	CALIFORNIA	2.79
24.	NORTH CAROLINA	2.78
25.	WASHINGTON	2.69
26.	TEXAS	2.63
27.	NEVADA	2.59
28.	WISCONSIN	2.59
29.	NEW YORK	2.57
	UNITED STATES	2.57
30.	INDIANA	2.55
31.	FLORIDA	2.49
32.	MICHIGAN	2.47
33.	TENNESSEE	2.46
34.	NEW JERSEY	2.44
35.	PENNSYLVANIA	2.44
36.	ARKANSAS	2.43
37.	KENTUCKY	2.41
38.	NEW HAMPSHIRE	2.30
39.	VIRGINIA	2.28
40.	MARYLAND	2.27
41.	MAINE	2.26
42.	MISSOURI	2.21
43.	ILLINOIS	2.15
44.	OHIO	2.15
45.	CONNECTICUT	2.09
46.	MASSACHUSETTS	1.97
47.	RHODE ISLAND	1.84
48.	DELAWARE	1.71

7 MEDIAN SCHOOL YEARS COMPLETED BY PERSONS 25 YEARS OF AGE AND OLDER, 1950

1. UTAH	12.0
2. CALIFORNIA	11.6
3. NEVADA	11.5
4. WASHINGTON	11.2
5. WYOMING	11.1
6. COLORADO	10.9
7. MASSACHUSETTS	10.9
8. OREGON	10.9
9. IDAHO	10.6
10. KANSAS	10.2
11. MAINE	10.2
12. MONTANA	10.1
13. NEBRASKA	10.1
14. ARIZONA	10.0
15. VERMONT	10.0
16. MICHIGAN	9.9
17. OHIO	9.9
18. CONNECTICUT	9.8
19. DELAWARE	9.8
20. IOWA	9.8
21. NEW HAMPSHIRE	9.8
22. FLORIDA	9.6
23. INDIANA	9.6
24. NEW YORK	9.6
25. ILLINOIS	9.3
26. NEW JERSEY	9.3
27. NEW MEXICO	9.3
28. RHODE ISLAND	9.3
29. TEXAS	9.3
UNITED STATES	9.3
30. OKLAHOMA	9.1
31. MINNESOTA	9.0
32. PENNSYLVANIA	9.0
33. MARYLAND	8.9
34. SOUTH DAKOTA	8.9
35. WISCONSIN	8.9
36. MISSOURI	8.8
37. NORTH DAKOTA	8.7
38. VIRGINIA	8.5
39. WEST VIRGINIA	8.5
40. KENTUCKY	8.4
41. TENNESSEE	8.4
42. ARKANSAS	8.3
43. MISSISSIPPI	8.1
44. ALABAMA	7.9
45. NORTH CAROLINA	7.9
46. GEORGIA	7.8
47. LOUISIANA	7.6
48. SOUTH CAROLINA	7.6

8 PERCENT OF SELECTIVE SERVICE REGISTRANTS DISQUALIFIED BY THE MENTAL TEST, 1956[a]

1. MONTANA	2.5%
2. IDAHO	3.2
3. IOWA	3.5
4. MINNESOTA	3.6
5. WASHINGTON	3.6
6. NORTH DAKOTA	3.8
7. OREGON	3.9
8. NEW HAMPSHIRE	4.6
9. WISCONSIN	4.6
10. NEBRASKA	4.9
11. UTAH	5.4
12. WYOMING	5.4
13. KANSAS	6.3
14. SOUTH DAKOTA	6.5
15. RHODE ISLAND	6.9
16. PENNSYLVANIA	8.2
17. MASSACHUSETTS	8.3
18. COLORADO	8.4
19. OHIO	8.5
20. OKLAHOMA	8.8
21. VERMONT	8.9
22. MICHIGAN	9.6
23. INDIANA	9.8
24. DELAWARE	10.1
25. MISSOURI	10.2
26. MAINE	10.4
27. CONNECTICUT	10.7
28. NEW JERSEY	13.4
29. NEVADA	13.7
30. NEW YORK	15.9
31. ILLINOIS	16.2
UNITED STATES	17.5
32. MARYLAND	18.0
33. ARIZONA	20.7
34. CALIFORNIA	21.2
35. NEW MEXICO	22.3
36. WEST VIRGINIA	23.1
37. TEXAS	24.8
38. TENNESSEE	26.6
39. VIRGINIA	29.3
40. KENTUCKY	30.2
41. ARKANSAS	32.8
42. FLORIDA	34.2
43. GEORGIA	35.1
44. NORTH CAROLINA	39.5
45. LOUISIANA	39.6
46. ALABAMA	40.7
47. SOUTH CAROLINA	41.2
48. MISSISSIPPI	44.9

[a] Includes those disqualified by mental tests only, and those disqualified by mental and physical tests.

Improving Homework

Suggestions for teachers and parents

MAXIMUM co-operation between classroom teachers and parents is essential to the success of any meaningful program of homework for public-school students, according to a review of expert opinion published recently by the Research Division.

It is not enough to tailor homework assignments which will enable the student to discover and make use of his capabilities. This effort must be supplemented by parents and teachers working together to implement a sound homework program and facilitate the steady intellectual development of the student.

ROLE OF THE TEACHER

The task of designing homework adapted to the needs of the individual student falls on the teacher. Flexibility in the kind of assignment must replace uniformity, with the objective of developing voluntary effort, initiative, responsibility, and self-direction in the student.

New or difficult work should be reserved for classroom instruction. Homework assignments should stem from class work, giving the student an opportunity to integrate and apply what he has learned. Assignments should meet the level of a student's maturity and provide him with motivation, challenge, and, above all, variety and interest.

Instruction in how to study is helpful. A student must clearly understand what he is to do and what the best methods of procedure are.

Some obligatory assignments involving rote memorization are essential to nearly every course of instruction. However, emphasis might best be placed on voluntary work which may be skipped in times of emergency and made up later.

Teachers should co-operate in planning homework so that the student does not find himself burdened with several heavy assignments at the same time. Failure to stagger the difficult or long homework assignments may discourage the student from completing his work properly.

A student-centered homework program must be implemented by active teacher-parent co-operation and interest. The classroom teacher should learn about parental attitudes and home conditions which affect the student's work. When difficulties occur, he might visit the home to talk over homework problems with parents. The teacher should be informed about any special problems the student may have with homework. The parent should be fully informed of the school's homework policies and expectations.

ROLE OF THE PARENT

The attitude of the parent toward the homework responsibilities of his child is most important. The parent who takes an active interest in his child's progress at school and at home and who has taught the child the value of education in our society will do more than anyone else in shaping the attitude of the student.

Parents should endeavor to provide a proper place for study and should see that the necessary materials are available. The student should be free from interruptions and conflicting demands during the time required to complete his assignments. He should be encouraged to stick to his assignment, receiving advice and help only when necessary. The parent should never do his child's homework for him.

The parent is a partner with the student and a partner with the teacher in helping the student profit from well-planned homework assignments. If parents and teachers co-operate fully in the execution of homework policy, the results will be rewarding for all concerned.

Research Division Studies

Articles in this issue of the bulletin are based on the following reports. Single copies of free items may be obtained from the Research Division; order others from NEA Publication-Sales Section, 1201 Sixteenth Street, N. W., Washington 6, D. C.

SALARY ROUNDUP

Advance Estimates of Public Elementary and Secondary Schools for the School Year 1957-58. November 1957. 32 p. 25¢.

Economic Status of Teachers in 1957-58. Special Memo. February 1958. 31 p. 50¢.

Examples of Relatively High-Level Salary Schedules for Teachers, 1957-58. February 1958. 4 p. Single copy free.

Four-Year Trends in School Salary Schedule Provisions, Urban School Districts, 30,000 and over in Population. January 1958. 6 p. Single copy free.

Minimum Annual Salaries for Teachers as Required by State Law, 1956-57 and 1957-58. December 1957. 3 p. Single copy free.

Salaries Scheduled for Regular Classroom Teachers in Public Schools in 18 Largest Cities, January 1, 1958. January 1958. 2 p. Single copy free.

Salary Schedules for Classroom Teachers, 1957-58, Urban School Districts 100,000 and over in Population. September 1957. 15 p. 25¢.

Salary Schedules for Classroom Teachers, 1957-58, Urban School Districts 30,000 to 100,000 in Population. October 1957. 27 p. 25¢.

STATISTICS FOR 1957-58

Advance Estimates of Public Elementary and Secondary Schools for the School Year 1957-58. November 1957. 32 p. 25¢.

TEACHERS FOR OUR COLLEGES

Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57. 1957. 76 p. Single copy free.

IMPROVING THE PROPERTY TAX

Equalization of Property Assessments. January 1958. 32 p. 40¢.

THE STATES AND EDUCATION

Rankings of the States. December 1957. 19 p. 25¢.

IMPROVING HOMEWORK

Homework. Information Memo. January 1958. 12 p. Single copy free.

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